IN THE CLAIMS:

Please AMEND the claims and ADD new claims as indicated below:

1. (CURRENTLY AMENDED) A noise light elimination method comprising:~~for eliminating noise light components contained in a signal light,~~

amplifying a signal light so that a power of signal light components in the amplified signal light exceeds a threshold value, and a power of noise light components in the amplified signal light is smaller than the threshold value;

applying the amplified signal light to ~~wherein~~ a stimulated Brillouin scattering generating medium that generates a return light due to stimulated Brillouin scattering when a light having a power exceeding ~~a~~ the threshold value is ~~input~~applied;~~, is applied with a signal light that has been amplified up to a power exceeding said threshold value,~~ and

extracting the return light generated by the stimulated Brillouin scattering generating medium ~~is extracted~~ as ~~a~~ the amplified signal light, to thereby eliminate the noise light components ~~contained~~ in the amplified signal light.

2. (ORIGINAL) A noise light elimination method according to claim 1,

wherein a power of the return light generated by said stimulated Brillouin scattering generation medium is adjusted.

3. (CURRENTLY AMENDED) A noise light elimination apparatus ~~for eliminating noise light components contained in a signal light,~~ comprising:

a stimulated Brillouin scattering generating medium that generates a return light due to stimulated Brillouin scattering when a light having a power exceeding a threshold value is ~~input~~ applied to the stimulated Brillouin scattering generating medium~~,~~; ;

an optical amplifying section that amplifies a signal light so that a power of signal light components in the amplified signal light exceeds the threshold value, and a power of noise light components in the amplified signal light is smaller than the threshold value~~up to a power exceeding said threshold value~~; and

an optical input/output section that applies the signal light amplified by said optical amplifying section to said stimulated Brillouin scattering generating medium, and extracts the return light generated by said stimulated Brillouin scattering generating medium as the amplified signal light.

4. (CURRENTLY AMENDED) A noise light elimination apparatus according to claim 3, further comprising:~~,~~

an adjusting section that adjusts a power of the return light generated by said stimulated Brillouin scattering generation medium.

5. (ORIGINAL) A noise light elimination apparatus according to claim 4,

wherein said adjusting section includes an optical amplifier that amplifies said return light.

6. (ORIGINAL) A noise light elimination apparatus according to claim 4,

wherein said adjusting section includes an optical attenuator that attenuates said return light.

7. (CURRENTLY AMENDED) A noise light elimination apparatus according to claim 4, further comprising:

a detection section that detects a power of the return light ~~output~~ outputting from said adjusting section; and

a control section that controls an operation of said adjusting section based on a detection result of said detection section.

8. (ORIGINAL) A noise light elimination apparatus according to claim 3,

wherein said stimulated Brillouin scattering generating medium is provided in a form of an optical transmission path.

9. (ORIGINAL) A noise light elimination apparatus according to claim 8,

wherein an optical fiber is used for said stimulated Brillouin scattering generating medium.

10. (ORIGINAL) A noise light elimination apparatus according to claim 8,

wherein an optical waveguide is used for said stimulated Brillouin scattering generating medium.

11. (CURRENTLY AMENDED) A noise light elimination apparatus according to claim 8,

wherein another end of said stimulated Brillouin scattering generating medium positioned on an opposite side to one end to which the signal light amplified by said optical amplifying section is ~~input~~applied, is subjected to non-reflection termination treatment.

12. (CURRENTLY AMENDED) A noise light elimination apparatus according to claim 3,

wherein said optical input/output section comprises an optical coupler having at least three ports, and an optical isolator, and the signal light amplified by said optical amplifier is input to a first port of said optical coupler and output from a second port of said optical coupler to said stimulated Brillouin scattering generation medium, and the return light generated by said stimulated Brillouin scattering generation medium is input to the second port of said optical coupler and branched into two to be output from the first port and a third port, respectively, and transmission of the return light ~~output~~ outputting from the first port of said optical coupler to said optical amplifying section is blocked by said optical isolator.

13. (ORIGINAL) A noise light elimination apparatus according to claim 3,

wherein said optical input/output section includes an optical circulator arranged between an optical output end of said optical amplifying section and an optical input end of said stimulated Brillouin scattering generating medium.

14. (ORIGINAL) An optical transmission system for amplifying a signal light sent from an optical transmission device to an optical transmission path, by optical repeaters arranged on the optical transmission path, to repeatingly transmit the signal light to an optical receiving device, comprising~~;~~:

at least one of the noise light elimination apparatus recited in claim 3 on the optical transmission path.

15. (ORIGINAL) An optical transmission system according to claim 14,

wherein said optical receiving device includes a demultiplexer that demultiplexes the signal light transmitted on said optical transmission path, in accordance with a wavelength thereof, and said demultiplexer has filter characteristics where a center wavelength of a transmission band is set in accordance with a wavelength shift amount due to stimulated Brillouin scattering occurring in said noise light elimination apparatus.

16. (ORIGINAL) An optical transmission system according to claim 15,

wherein said demultiplexer includes an arrayed wave guide grating capable of adjusting the filter characteristics.

17. (NEW) A method comprising:

providing a stimulated Brillouin scattering (SBS) generating medium that generates a return light due to SBS when a light having a power exceeding a threshold value of the SBS generating medium is input to the SBS generating medium;

amplifying a signal light so that a power of signal light components in the amplified signal light exceeds the threshold value of the SBS generating medium, and so that a power of noise light components in the amplified signal light is smaller than the threshold value of the SBS generating medium;

inputting the amplified signal light to the SBS generating medium so that a return light is thereby generated in response to the signal light components in the amplified signal light; and

extracting the return light generated by the SBS generating medium in response to the signal light components in the amplified signal light, to thereby eliminate the noise light components from the amplified signal light.

18. (NEW) A method as in claim 17, further comprising:

providing the extracted return light to a transmission line as the amplified signal light.

19. (NEW) An apparatus comprising:

means for providing a stimulated Brillouin scattering (SBS) generating medium that generates a return light due to SBS when a light having a power exceeding a threshold value of the SBS generating medium is input to the SBS generating medium;

means for amplifying a signal light so that a power of signal light components in the amplified signal light exceeds the threshold value of the SBS generating medium, and so that a power of noise light components in the amplified signal light is smaller than the threshold value of the SBS generating medium;

means for inputting the amplified signal light to the SBS generating medium so that a return light is thereby generated in response to the signal light components in the amplified signal light; and

means for extracting the return light generated by the SBS generating medium in response to the signal light components in the amplified signal light, to thereby eliminate the

noise light components from the amplified signal light.

20. (NEW) A method comprising:

inputting an amplified signal light to a stimulated Brillouin scattering (SBS) generating medium, the inputted amplified signal light having a signal light component with a power exceeding a threshold value of the SBS generating medium at which return light due to SBS is generated in the SBS generating medium, and having a noise light component with a power smaller than the threshold value, to thereby cause the SBS generating medium to generate return light in response to the signal light component in the amplified signal light but not generate a return light in response to the noise light component; and

extracting the return light generated by the SBS generating medium in response to the signal light component in the amplified signal light.

21. (NEW) A method as in claim 20, further comprising:

providing the extracted return light to a transmission line as the amplified signal light.

22. (NEW) An apparatus comprising:

means for inputting an amplified signal light to a stimulated Brillouin scattering (SBS) generating medium, the inputted amplified signal light having a signal light component with a power exceeding a threshold value of the SBS generating medium at which return light due to SBS is generated in the SBS generating medium, and having a noise light component with a power smaller than the threshold value, to thereby cause the SBS generating medium to generate return light in response to the signal light component in the amplified signal light but not generate a return light in response to the noise light component; and

means for extracting the return light generated by the SBS generating medium in response to the signal light component in the amplified signal light.